OH1009084B (英) (西) Printed in Japan

CASIO

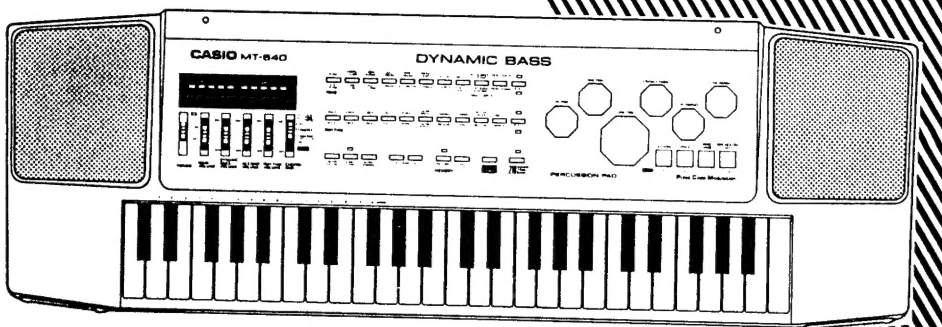
CASIO

MT-640

ELECTRONIC MUSICAL INSTRUMENT
INSTRUMENTO MUSICAL ELECTRONICO

OPERATION MANUAL 2

MANUAL DE OPERACION 31



(英) (西)

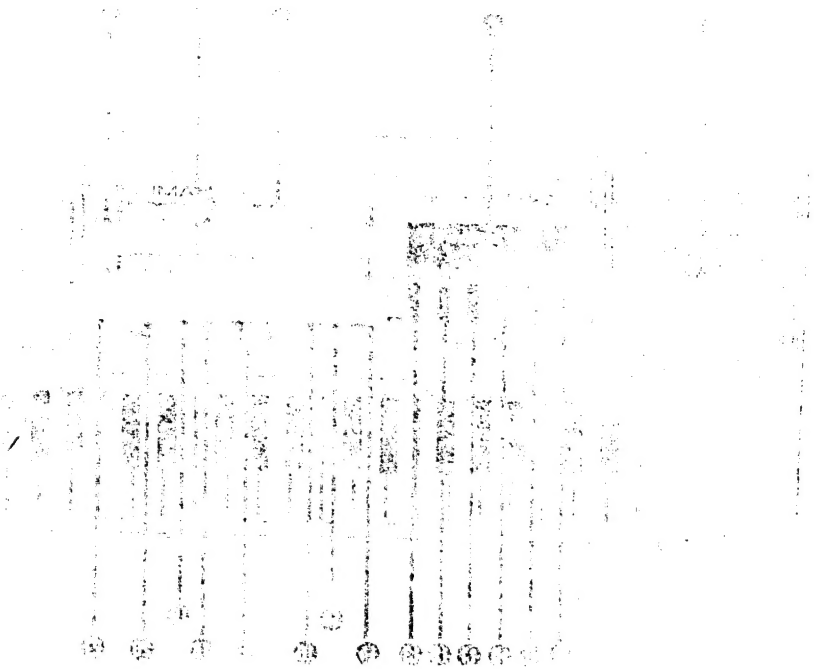
CASIO® MT-640

ELECTRONIC MUSICAL INSTRUMENT

Introduction

Your new MT-640 keyboard is a state-of-the-art musical instrument which incorporates the latest electronics technology to make its operation as easy as possible. Exceptional sound quality backed up by a host of sophisticated features and functions makes this keyboard a joy to play for everyone.

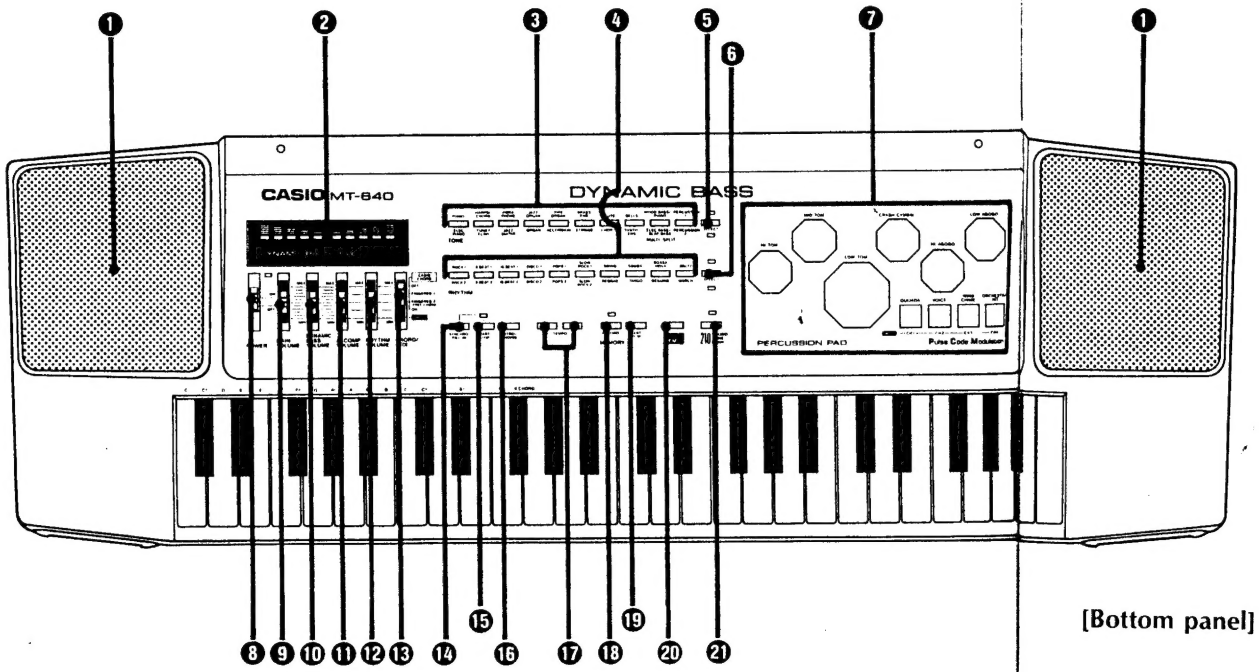
In order to enjoy the features and functions of this unit to their fullest, be sure to carefully read this manual and follow the instructions contained herein.



Contents

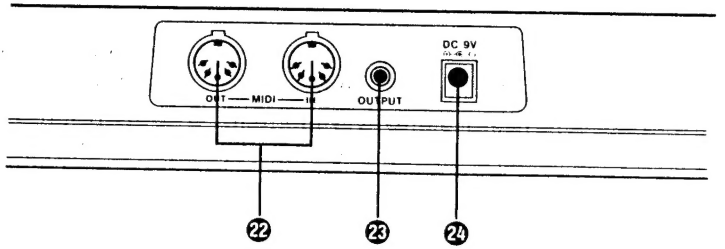
1. General Guide 4
2. Power Supply 6
3. General Operation 7
4. Dynamic Bass System 8
5. Preset Tones 9
6. Tone Bank Sound Combinations 12
7. Auto-rhythms 14
8. Auto-accompaniment 15
9. Percussion Solo Pads 19
10. Performance Memory Function 20
11. MIDI 22
12. Troubleshooting 27
13. Care of Your Keyboard 28
14. Specifications 29

1 General Guide



❶ Built-in speakers
❷ Dynamic bass level indicators
❸ Tone selectors
❹ Rhythm selectors
❺ Tone select button
❻ Rhythm select button
❼ Percussion solo pads
❽ Power switch
❾ Main volume slider
❿ Dynamic bass volume slider
⓫ Accomp volume slider
⓬ Rhythm volume slider
⓭ Chord/MIDI selector
⓮ Synchro/fill-in button
⓯ Rhythm start/stop button
⓰ Intro/ending button
⓱ Tempo control buttons
⓲ Record button
⓳ Recording start/stop button
⓴ Demo button
㉑ Tone Bank button

[Rear panel]



㉒ MIDI terminals (IN/OUT)
㉓ Headphone jack
㉔ AC adaptor jack

[Bottom panel]

㉕ Tuning control
Adjusts the pitch of the entire keyboard within ±30 cents and allows easy tuning with other instruments.

Demonstration Tune

This unit features a preset demonstration tune which has been carefully programmed to showcase all the features and benefits of this unit. Simply press the Demo button ⓴, and listen to the MT-640 plays itself!

DEMO

* *The demonstration tune is played in an endless loop. Press the Demo button again to stop the tune.*
* *The keyboard is inoperable while playing the demonstration tune.*

2 Power Supply

DC Power

- **Dry batteries**

  This unit can be powered by six D size (SUM-1/R20P) manganese dry cell batteries. Weakened batteries will result in lower volume or poor tonal quality. The power indicator lamp will gradually lose its brightness when battery power weakens. At this time, change batteries or shift to one of the alternate power sources mentioned below.

Battery replacement:

① Open the battery compartment cover on the bottom of the unit and take out used batteries.

② Load new batteries taking care that polarity is correct.

** It is advisable to replace all six batteries at the same time for longer battery life.*

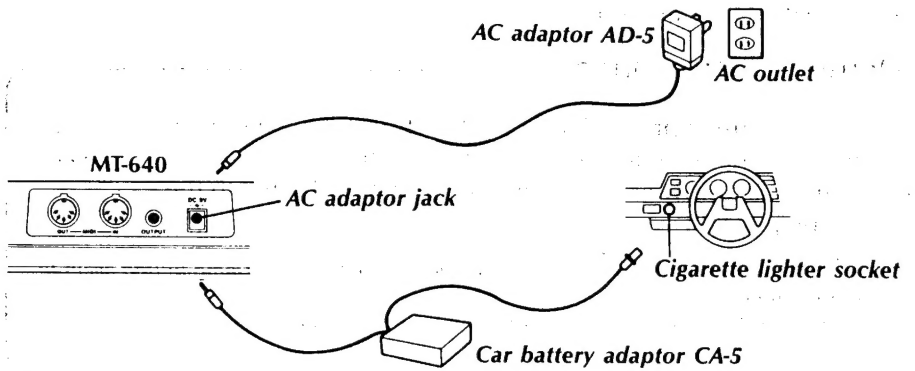
** Standard battery life is approximately 6 hours.*

- **Car battery**

  With the car battery adaptor (CA-5, optional), DC power is supplied from a car battery through the cigarette lighter socket.

AC Power

An AC adaptor (AD-5, optional) is required when using household current. Use only a genuine CASIO adaptor with the same voltage rating (100, 117, 220, or 240) as the power supply in your area to prevent component damage. Plug the AC adaptor into the AC outlet and the cord into the unit. This will automatically cut off the battery power supply.



★ **Auto power off function**

Power is automatically cut off approximately 6 minutes after the last operation of the unit. Power supply can be restored by switching power OFF and then ON again.

CAUTION

* Use only genuine CASIO adaptors to avoid risk of damage.

* Remove batteries from the battery compartment when the unit is not used for extended periods. (Battery leakage can damage electrical parts.)

* The adaptor may become warm when left connected to an outlet. This is normal, but the adaptor should be disconnected when not in use.

* THE FOLLOWING CONDITION CAN CAUSE BATTERIES TO BURST:

1. Use of adaptors other than genuine CASIO adaptors.

2. Loading batteries with polarities reversed.

3 General Operation

** Refer to the general guide found on page 4-5 for exact locations of this keyboard controls and connections.*

① Turn the power switch ON.

② Adjust the volume level.

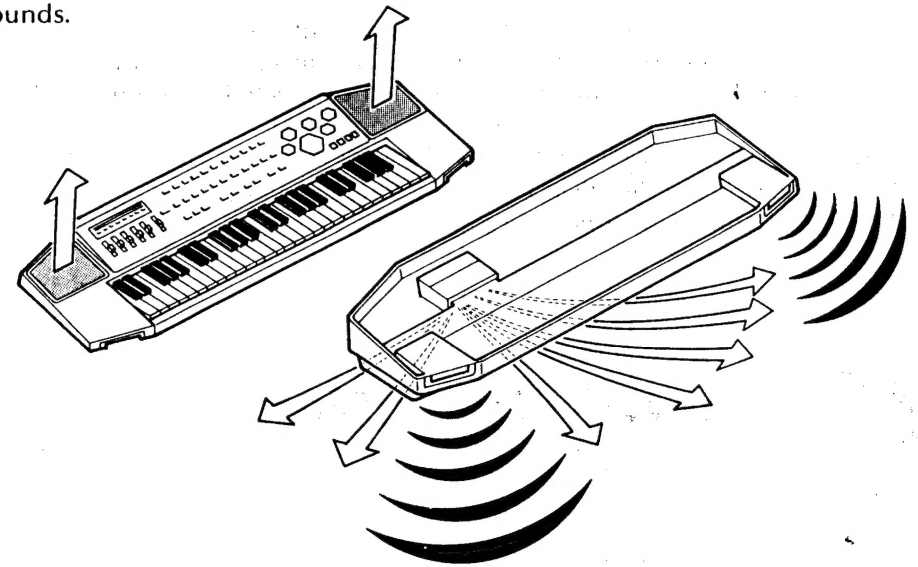
③ Select one of 20 preset tones (see "Preset Tones", page 9) or one of 210 Tone Bank sounds (see "Tone Bank Sound Combinations", page 12).

④ Now, start playing.

4 Dynamic Bass System

** Refer to the general guide found on page 4-5 for exact locations of this keyboard controls and connections.*

The MT-640 equipped with Casio's innovative "Dynamic Bass System" for rich, powerful bass response. In addition to full-range stereo speakers on the front panel, a "super woofer" is located on the bottom of the MT-640. And the MT-640 body is designed to act as a speaker cabinet, as bass sounds are channeled through internal sound ducts and output through twin ports as well as from the bottom of the unit. This results in dynamic, multi-directional bass sounds.



- **Dynamic Bass Volume Slider**

  You can adjust the volume of the "Dynamic Bass" sound independently, to gain just the right effect for the type of music you're playing.

- **Dynamic Bass Level Indicators**

  The MT-640 features a linear bar indicator located on the front panel, which shows the volume level of the dynamic bass sound.

5 Preset Tones

** Refer to the general guide found on page 4-5 for exact locations of this keyboard controls and connections.*

- **To select a preset tone**

① Specify either the upper or lower row of preset tones by pressing the tone select button. The upper or lower select indicator lights to show the active row.

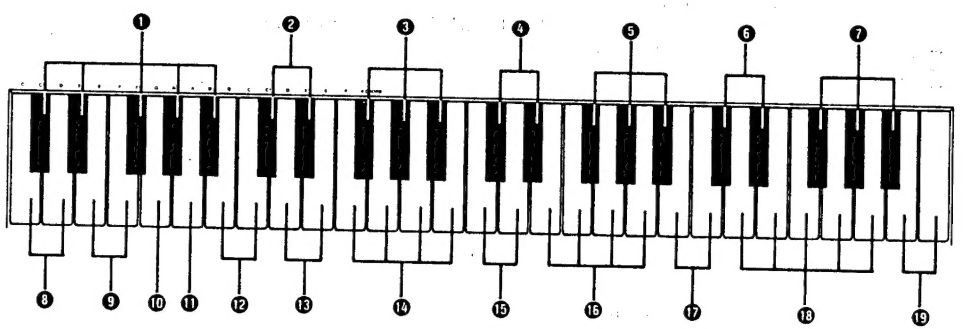
② Press one of the tone selectors to choose a preset tone.

** "PIANO" tone is automatically selected when power is turned ON.*

- **Percussion 1 and Percussion 2 Tones**

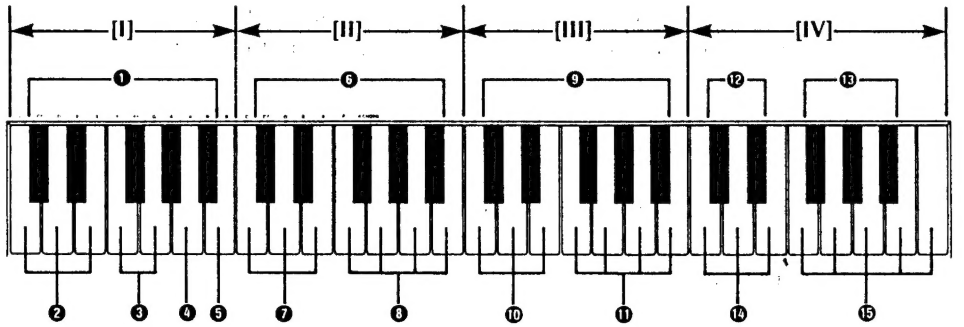
  By selecting the percussion 1 or percussion 2 tones, you can play a wide variety of percussion sounds using the keyboard keys.

<Percussion 1 Sounds>



❶ Tom-toms; 1/2/3/4/5
❷ Ride symbals; 1/2
❸ Synth tom-toms; Hi/Mid/Low
❹ Gongs; 1/2
❺ Synth cymbals; 1/2/3
❻ Triangle; Open/Muted
❼ Synth percussion; 1/2/3
❽ Bass drums; 1/2
❾ Snare drums; 1/2
❿ Gated snare drum
⓫ Rim shot
⓬ Closed hi-hats; 1/2
⓭ Open hi-hats; 1/2
⓮ Crash cymbals; 1/2/3/Mixed
⓯ Cow bells; Hi/Low
⓰ Timbales; Hi mute/Hi/Low/Mixed
⓱ Claves; Hi/Low
⓲ Congas; Hi mute/Hi/Middle/Low/Mix
⓳ Agogos; Hi/Low

<Percussion 2 Sounds>



(Section I—Japanese Sounds)
❶ Shouts; L Speaker/R Speaker/Middle 1/Middle 2/Two people
❷ Wood blocks; Left/Middle/Right
❸ Hand drums; Hi/Low
❹ Wood blocks (L)/Hand drum (R)
❺ Shout (L)/Hand drum (R)

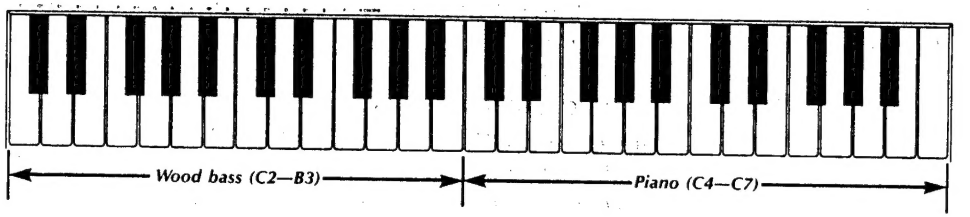
(Section II—Latin Sounds)
❻ Voices; 1/2/3/4/5
❼ Quijadas; Left/Middle/Right
❽ Wind chimes; L to R 1/R to L 1/L to R 2/R to L 2

(Section III—Orchestra Sounds)
❾ Orchestra Hits; 1/2/3/4/5
❿ Cymbals; Left/Middle/Right
⓫ Tympanis; 1/2/3/4

(Section IV—Daily Life)
⓬ Telephone; Left/Right
⓭ Car horns in distance; 1/2/3
⓮ Typewriter; Low typing/Hi typing/Bell
⓯ Car horns; 1/2/3/4/5

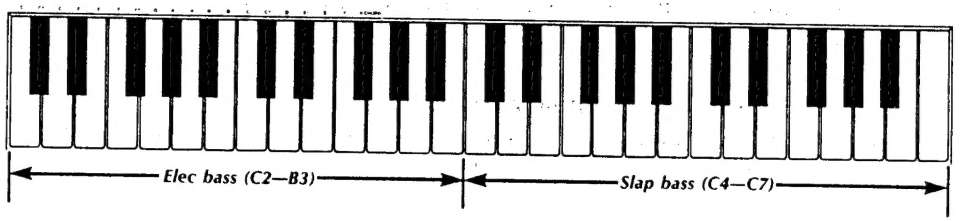
• **Wood Bass/Piano Tone**

By selecting the wood bass/piano tone, you can play a wood bass sound with the left hand and play piano with the right hand.



• **Electric Bass/Slap Bass**

By selecting the elec bass/slap bass tone, you can play a straight electric bass sound with the left hand and play a slap bass sound with the right hand.



6 Tone Bank Sound Combinations

** Refer to the general guide found on page 4-5 for exact locations of this keyboard controls and connections.*

This keyboard features Casio's innovative "Tone Bank" feature, which lets you choose from an amazing total of 210 different sound combinations. To create these layered sounds, the Tone Bank function actually integrates the characteristics of the 20 preset tones. You can select these sound combinations through the following procedure.

• To select Tone Bank Sound Combinations

① Select any of the 20 preset tones. When selecting Tone Bank sound combinations, the tone initially selected is used as a base, or "Primary" sound.

** When the Primary sound is selected, the keyboard features 10-note polyphony.*

② Press the Tone Bank button.
This activates the Tone Bank function, allowing you to choose a Secondary sound to integrate with the Primary sound you just selected.

** After the Tone Bank button is pressed, the keyboard changes to 5-note polyphony.*

③ Select any other of the 20 preset tones. The characteristics of this "Secondary" sound is automatically integrated with those of the "Primary" sound already selected.

• To select a different secondary sound

The secondary sound can be changed at any time, as long as the Tone Bank function is selected. Simply select a different preset tone—the primary sound remains the same.

• To select a different primary sound

The primary sound can be changed by first turning the Tone Bank function OFF (press Tone Bank button so that indicator goes out), selecting any other preset tone, and finally turning the Tone Bank function back ON. The secondary tone remains the same in this case.

<Example of Tone Bank Operation>

① Select the preset ORGAN tone by pressing the corresponding tone selector. (This is the "Primary" sound.) Initially, the ORGAN tone can be played with 10-note polyphony.

② Press the Tone Bank button.
The ORGAN tone can now be played with 5-note polyphony.

** Indicator above the Tone Bank button lights.*

NOTE:
When power is turned ON, the PIANO tone is automatically selected in Tone Bank memory. Because of this, procedure ② above causes the ORGAN tone to be integrated with the PIANO tone.

③ Select the preset CHORUS tone by pressing the corresponding tone selector. (This is the "Secondary" sound.) Now, the "ORGAN + CHORUS" integrated Tone Bank combination sound can be played with 5-note polyphony.

④ Next, try changing the Secondary sound by selecting the preset FLUTE tone. The "ORGAN + FLUTE" integrated Tone Bank combination sound can be played with 5-note polyphony.

⑤ Next, try changing the Primary sound by first pressing the Tone Bank button once again to turn the Tone Bank function OFF temporarily. The preset ORGAN tone can once again be played with 10-note polyphony.

⑥ Select a new Primary sound—the STRINGS tone for example, and turn the Tone Bank function back ON. As the secondary sound (FLUTE) does not change in this case, you can now play the "STRINGS + FLUTE" integrated Tone Bank combination sound with 5-note poly-phony.

7 Auto-rhythms

** Refer to the general guide found on page 4-5 for exact locations of this keyboard controls and connections.*

• Playing an auto-rhythm

① Press the rhythm select button to choose the upper row or the lower row of auto-rhythms. The upper or lower select indicator lights to show the active row.
② Press one of the rhythm selectors.
③ Press start/stop button to start the rhythm.
④ Adjust the tempo of the rhythm by using the tempo control buttons. Pressing the <▲> button will increase tempo, while pressing the <▼> button will decrease tempo.

** Tempo of the auto-rhythm can be adjusted between 40 and 256 beats per minute. Pressing both tempo keys at the same time resets the tempo to 132 beats per minute.*

⑤ You can adjust the relative volume of the rhythm by using the rhythm volume slider.
⑥ Press start/stop button once again to stop auto-rhythm play.

• Using Synchro/fill-in button

Press to enter synchro start standby. Rhythm starts when an accompaniment keyboard key (lower 1.5 octave, C through F) is pressed. (See page 16 to use synchro start in the auto-accompaniment performance.) When pressed during auto-rhythm and accompaniment performance, an appropriate fill-in is inserted in the rhythm pattern. If the button is held down, the fill-in pattern is repeated until the end of the measure during which the button is released.

• Using Intro/ending button

If you press the intro/ending button instead of pressing the start/stop button to start an auto-rhythm, the selected auto-rhythm begins after a one-measure intro pattern. This can be an effective way to lead into auto-rhythm performance. If pressed during auto-rhythm and accompaniment performance, the rhythm stops after an appropriate ending pattern.

★ Using synchro start with an intro pattern

Press the synchro/fill-in button to enter synchro start standby, and subsequently press the Intro/ending button. Rhythm starts when an accompaniment keyboard key is pressed, after a one-measure intro pattern.

8 Auto-accompaniment

** Refer to the general guide found on page 4-5 for exact locations of this keyboard controls and connections.*

• Chord/MIDI selector

Slide to select one of the Casio Chord functions (or MIDI function).

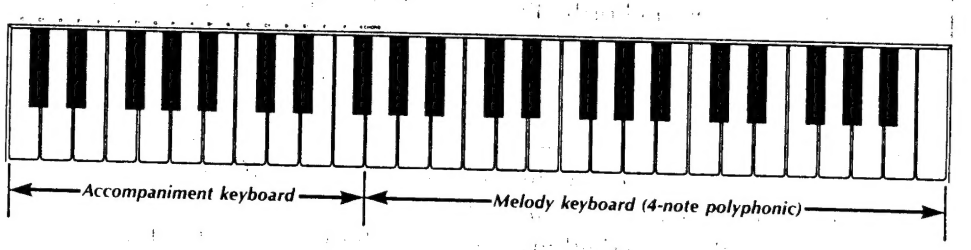
OFF .....For normal play without auto-accompaniment.
FINGERED 1 & 2 ...For auto-accompaniment pressing chords as usual.
ON .....For auto-accompaniment using the Casio Chord system.
MIDI .....Set to use the MIDI functions (refer to "11. MIDI").

• Accomp volume slider

Adjust the volume of the auto-accompaniment.

NOTES:

- If the Chord/MIDI selector is set to "FINGERED (1 or 2)" or "ON", the lower 1.5 octave of the keyboard become accompaniment keyboard keys, and the upper part of the keyboard becomes 4-note polyphonic.



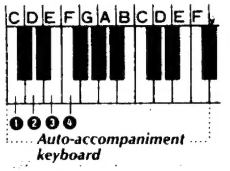
- During auto-accompaniment performance, chord played on the accompaniment keyboard will continue to sound after releasing the keys.
- Auto-accompaniment starts with rhythm, the moment the accompaniment keyboard key is pressed if synchro start is in standby status.

Casio Chord system

The Casio Chord system has been developed so you can play the four main types of chords more easily. Playing of the chords is simplified as shown below:

- Pressing one of the accompaniment keyboard keys produces a major chord corresponding to that note.
- Simultaneously pressing any key to the right (two keys at the same time) results in a minor chord.
- Similarly, pressing one more key to the right (three keys in all) produces a seventh chord, and pressing the fourth key to the right (four keys in all) creates a minor seventh chord.

<Examples>
C (C major chord)—Press ❶.
Cm (C minor chord)—Press ❶, ❷ together.
C7 (C seventh chord)—Press ❶, ❷, ❸ together.
Cm7 (C minor seventh chord)—Press ❶, ❷, ❸, ❹ together.



** Not only ❷, ❸, and ❹, but any black or white keys can be used as long as they are to the right of ❶.*

[1] Auto-accompaniment using the Casio Chord system (One-finger method)

① Set the Chord/MIDI selector to "ON".
② Select one of the auto-rhythms and press the synchro/fill-in button.
** Tempo indicator lights, meaning that the accompaniment keyboard keys are ready for play.*
③ Play on the accompaniment keyboard keys according to the Casio Chord system.
** Adjust the tempo and accompaniment volume using the respective controls.*

[2] Auto-accompaniment play using standard chord fingering

① Set the Chord/MIDI selector to "FINGERED 1" or "FINGERED 2".
② Select one of the auto-rhythms and press the synchro/fill-in button.
** Tempo indicator lights, meaning that the accompaniment keyboard keys are ready for play.*
③ Play a chord on the accompaniment keyboard keys.
** Adjust the tempo and accompaniment volume using the respective controls.*
** This unit is capable of recognizing the following chords; <M, m, −5, +5, dim, sus4, 7, M7, m7, mM7, m7-5, 7sus4, 9, m9>*

<About "Fingered 1" and "Fingered 2">

This keyboard features two different types of fingered accompaniment patterns. You can select which type you want by selecting either the Fingered 1 mode, or the Fingered 2 mode. Respective accompaniment patterns and characteristics are as listed below.

(Fingered 1 Accompaniment)
Accompaniment consists of a single bass line and two different backing chord patterns. The pattern does not change until you play a chord consisting of at least 3 notes.

(Fingered 2 Accompaniment)
Accompaniment consists of a single bass line and a single backing chord pattern. In addition, you can add notes manually in two-note polyphony on the "accompaniment keyboard" without affecting the accompaniment pattern. The pattern does not change until you play a chord consisting of at least 3 notes. Fingered 2 accompaniment also allows you to choose the way the chord will play rhythmically. If you keep repeating your chord shape in any rhythmic pattern you choose (quarter-notes, eight-note triplets or any syncopation) this keyboard will play that chord pattern rhythm, allowing for more flexibility in your accompaniment patterns.

** Auto-accompaniment tones are preset in correspondence to each auto-rhythm type. A list of auto-rhythms and corresponding accompaniment tones is provided on page 18.*

<About the tones used in the auto-accompaniment>

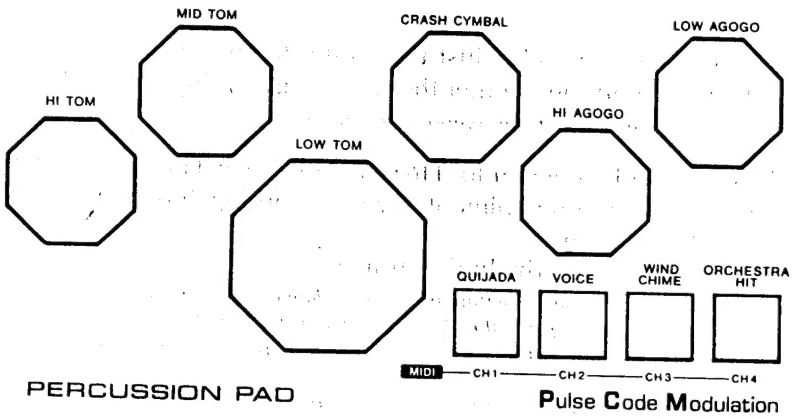
Each auto-accompaniment pattern consists of one bass line and two types of chord lines (chord 1 and chord 2). The tones of these elements are preset corresponding to each auto-rhythms as shown below;

RHYTHMS	CHORD 1 TONES	CHORD 2 TONES	BASS TONES
ROCK 1	BRASS ENS.	METALLIC SOUND	SLAP BASS
ROCK 2	BRASS	SYNTH. CLAVI	SLAP BASS
8 BEAT 1	JAZZ ORGAN	PIANO	SLAP BASS
8 BEAT 2	METALLIC SOUND	BRASS ENS.	SLAP BASS
16 BEAT 1	MARIMBA	ELEC. PIANO	SLAP BASS
16 BEAT 2	SYNTH. CLAVI	BRASS ENS.	SLAP BASS
DISCO 1	SYNTH. CELESTA	BRASS ENS.	SLAP BASS
DISCO 2	HARP	STRINGS	BRASS ENS.
POPS 1	JAZZ ORGAN	PIANO	WOOD BASS
POPS 2	FLUTE	BRASS ENS.	SLAP BASS
SLOW ROCK 1	PIANO	VIBRAPHONE	WOOD BASS
SLOW ROCK 2	PIANO	HARP	WOOD BASS
SWING	PIANO	BRASS ENS.	WOOD BASS
SAMBA	SYNTHE. CLAVI	JAZZ ORGAN	SLAP BASS
BOSSA NOVA	ELEC. PIANO	STRINGS	WOOD BASS
WALTZ	STRINGS	ORGAN	WOOD BASS
REGGAE	JAZZ ORGAN	FUNKY CLAVI	SLAP BASS
TANGO	ACCORDION	PIANO	WOOD BASS
BEGUINE	PIANO	JAZZ GUITAR	WOOD BASS
MARCH	BRASS ENS.	FLUTE	BRASS ENS.

9 Percussion Solo Pads

** Refer to the general guide found on page 4-5 for exact locations of this keyboard controls and connections.*

The MT-640 features a total of 10 percussion solo pads that let you add unique fill-ins and accents to your performance. Preset percussion sounds can be triggered by simply tapping the pads with your finger(s). In addition to 6 standard percussion pads, the MT-640 features 4 unique "sound effect" percussion pads, including Quijada, Voice, Wind Chime, and Orchestra Hit sounds.



NOTE:

4 of the percussion pads perform other functions when set for MIDI performance.

10 Performance Memory Function

** Refer to the general guide found on page 4-5 for exact locations of this keyboard controls and connections.*

The MT-640's performance memory function lets you record an entire performance as you play on the keyboard. Up to 1,250 notes can be stored in memory for subsequent playback. What's more, auto-rhythm tracks and a variety of keyboard settings are recorded as well (see list below).

To Record

① Start an auto-rhythm and adjust the tempo to your satisfaction.
② Press the record button to enter the recording standby mode (LED flashes).
** Note that you can also adjust the tempo in this mode.*

③ Set the Chord/MIDI selector to "FINGERED 1", "FINGERED 2", or "ON" if you want to use auto-accompaniment in your recording. If not, set this selector to the "OFF" position.
④ Select one of the auto-rhythms you like.
** If you don't want to use an auto-rhythm in your recording (or if you want to start an auto-rhythm mid-way during recording), press the rhythm start/stop button at this point.*
** If you want to start an auto-rhythm using an intro pattern, press the intro/ending button at this point.*
** If you want to start an auto-rhythm using synchro start, press the synchro/fill-in button at this point.*

⑤ Press the recording start/stop button to start recording. Recording starts after one measure of audible beat count.
⑥ Begin your performance. The MT-640 records your entire performance, just the way you play it.

Recorded Operations:
In addition to keyboard play, the performance memory records the following keyboard settings and operations.

- Preset tones
- Tone bank selection
- Auto-rhythm selection
- Auto-rhythm start/stop
- Auto-rhythm intro start
- Fill-in patterns
- Percussion solo pad performance
- Auto-rhythm ending pattern

⑦ Press the recording start/stop button again to stop recording.

NOTES:
- Memory capacity is approximately 1,250 notes. Operations such as changes in rhythms and Tone Bank sound selections are counted as half-notes.
- Recording automatically ends when you reach the memory capacity.

To Play Back Memory Contents

① Press the recording start/stop button to play back your performance. The start/stop LED flashes and playback begins.

- You can play along with memory playback using the entire keyboard, as long as recording has been done in the Casio Chord "OFF" mode. If you recorded using the Casio Chord function, only the melody keyboard (upper keys) can be utilized.
- In this playback status, all switches and buttons except the volume sliders and 6 of the percussion pads (hi tom, mid-tom, low tom, crash symbal, hi agogo and low agogo) are inoperative. Tempo of playback cannot be adjusted.

② Press the recording start/stop button again to stop playback.

11 MIDI

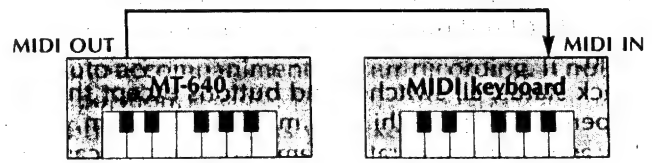
** Refer to the general guide found on page 4-5 for exact locations of this keyboard controls and connections.*

The MT-640 is equipped with MIDI—the Musical Instrument Digital Interface. This industry-standard interface allows you to connect the MT-640 to other MIDI-equipped electronic musical instruments, drum and rhythm machines, sequencers and even personal computers.

MIDI IN terminal .....Receives MIDI signal from external devices.
MIDI OUT terminal .....Sends MIDI signal to external devices.

11-1 Using the MT-640 as a MIDI Master keyboard

① Connect devices using MIDI cables.



② Set the Chord/MIDI selector to "MIDI". The MIDI basic channel is automatically set to channel 1.

③ Choose the MIDI basic channel you want to use (see 11-3 to set the MIDI basic channel on the MT-640). Make sure the basic channel is the same for the slave.

- *When basic channels 1-3 are selected, note on/off messages and program changes messages (using tone selectors) can be transmitted on the selected MIDI channel. In addition, MIDI clock messages and program changes messages (using rhythm selectors) can be transmitted on MIDI channel 4.*
- *When channel 4 is selected as the MIDI basic channel, note on/off messages and program change messages (using tone selectors) can be transmitted, however MIDI clock messages cannot be transmitted.*

11-2 Using the MT-640 as a MIDI Slave keyboard

① Connect devices using MIDI cables.

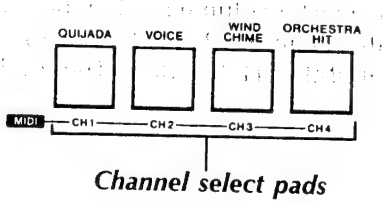
② Set the Chord/MIDI selector to "MIDI."

③ Choose the MIDI basic channel you want to use on the master device. You can choose channel 1 through 3 on the master device. Channel 4 is also available when this channel is used as fourth voice on the MT-640 (refer to 11-8).

- *When using the MT-640 as a slave keyboard, the polyphony on this unit is limited according to the MIDI channel (refer to "Multi-timbral polyphony" in 11-4).*
- *Note on/off messages and program change messages are received on the selected channel. Program change messages can be received simultaneously on channel 4.*
- *When program change messages are received, MT-640 preset tone selection is altered in correspondence to the received program change number. When received on channel 4, the MT-640 preset auto-rhythm changes as well, providing that channel 4 is used as the clock channel.*

11-3 To set the MIDI basic channel

To set the MT-640's MIDI basic channel, make sure the Chord/MIDI selector is in the MIDI position, then simply press one of the channel select pads (1–4, normally used as percussion pads).



NOTE:
While MIDI transmit polyphony for each channel is unlimited, the polyphony played on the keyboard is limited according to the selected MIDI basic channel (1–4), as shown in "Multi-timbral Polyphony" (refer to 11-4).

11-4 Using the MT-640 as a multi-timbral sound source

In addition to single-keyboard transmission/reception, the MT-640 can be set to receive multiple MIDI messages, assigning different voice to channels 1 through 3, with channel 4 used as either a fourth voice (see 11-8) or to send MIDI clock messages (see 11-7).

<Multi-timbral Polyphony>

CH-1: 6 notes
CH-2: 4 notes
CH-3: 2 notes
CH-4: 4 notes (when used as a fourth voice)

11-5 To set the timbre (preset tone) of each MIDI channel

A single preset tone can be assigned to each MIDI channel through the following procedures.

① Press the CH 1 pad of the channel select pads.
② Select the desired preset tones by pressing the corresponding tone selector. The selected tone is assigned to MIDI channel 1.
③ Repeat procedures ① and ②, pressing the CH 2 and CH 3 pads (and CH 4, if desired).

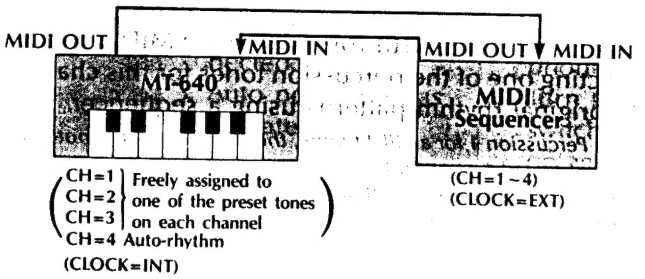
NOTE:
The voice assigned to each MIDI channel can be altered when the MT-640 receives program change messages from other MIDI keyboards or MIDI devices.

11-6 Balancing volume levels of MIDI channels

In addition to altering the master volume level in the MIDI mode, you can also control the balance of MIDI channels 2 and 4, by using the ACCOMP VOLUME (CH 2) and RHYTHM VOLUME (CH 4) sliders. The level of channel 3 is fixed.

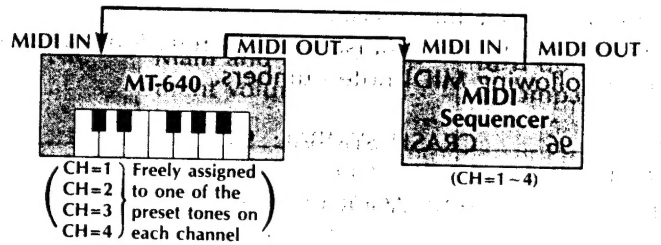
11-7 Using channel 4 as the MIDI Clock channel

You can use channel 4 as the MIDI clock channel to transmit MIDI internal clock messages. Channel 4 is automatically set to transmit MIDI clock messages when the Chord/MIDI selector is set to MIDI.



11-8 Using channel 4 as the fourth voice

If you want to use channel 4 as the fourth voice, simply press the CH 4 pad of the channel select pads.



NOTE:
To reset channel 4 to the clock mode, simply alter the Chord/MIDI selector setting and then reset it to the "MIDI" position.

11-9 Using the MT-640 as a MIDI percussion sound source

When either of the "Percussion" tones are selected as a MIDI timbre, you can use the MT-640 as a MIDI percussion sound source. (Refer to page 9-10 for details on percussion sound key assignments.)

When channel 4 is used as a fourth voice instead of MIDI clock message transmission, try selecting one of the percussion tones for this channel. In this way, you can create original rhythm patterns using a sequencer.

* *When you select Percussion 1 for a MIDI timbre, the reception of the note number 85 through 90 causes "opened triangle" to sound.*
* *When you select Percussion 2 for a MIDI timbre, the reception of the note number 85 through 90 causes "typewriter bell" to sound.*

11-10 Using Drum Pads in the MIDI mode

When the Chord/MIDI selector is set to "MIDI", percussion sounds assigned to the channel select pads (Quijada, Voice, Wind Chime, Orchestra Hit) do not sound. Other percussion pads operate normally, however.

- Percussion Pad MIDI Transmission
  When the MT-640 is set to transmit, the percussion pads trigger transmission of the following MIDI note numbers.

HI TOM:	96	CRASH SYMBAL:	93
MID TOM:	95	HI AGOGO:	92
LOW TOM:	94	LOW AGOGO:	91

- Percussion Pad MIDI Reception
  When the MT-640 is set to receive, pad sounds are triggered upon reception of the note numbers listed above.

11-11 Additional preset tones in the MIDI mode

The following tones can be utilized when receiving MIDI program numbers 20 through 29.

Program No.	Tones	Program No.	Tones
20	Honky-tonk piano	25	Synth celesta
21	Marimba	26	Synth clavi
22	Oboe	27	Metallic sound
23	Synth reed	28	Fantasy
24	Harp	29	Miracle

12 Troubleshooting

** For any malfunction, always check battery condition first. (see page 6)*

Trouble	Possible Cause	Remedy
No sound, even if keys are pressed.	1. Main volume turned down. 2. Headphones connected. 3. Auto power off has activated.	1. Turn up main volume. 2. Disconnect headphones. 3. Turn the power switch off and then on again.
Tone bank inoperative. Record button inoperative. 4 square percussion pads inoperative (do not sound).	Chord/MIDI selector is set to MIDI position.	Change setting of Chord/MIDI selector.
No rhythm.	Rhythm volume turned down.	Turn up rhythm volume.
No accompaniment.	Main and accompaniment volume turned down.	Turn up main and accompaniment volume.
Occasional interference.	Refrigerators, washing machines and similar electric appliances.	Use outlet as far away as possible from appliance thought to be the cause.
No sound when connected to external amplifier.	1. Main volume turned down. 2. Defective connection cord.	1. Turn up main volume. 2. Replace connection cord.

13 Care of Your Keyboard

1. **Avoid heat, humidity, and direct sunlight.**
   Do not overexpose the unit to direct sunlight, place it near a heater, or in any area subject to high temperature.

2. **Avoid severe impacts and do not drop.**
   Severe impacts can result in malfunction. When carrying or transportion the unit, protect the keyboard and keys by packing with soft cloth.

3. **Keep the unit free of liquids, dust, particles, etc.**
   Do not allow foreign matter to enter between the keys. Be especially careful of metallic objects such as hairpins, sewing needles or coins. Also, do not allow the unit to get wet.

4. **Never attempt to modify any part of the unit.**
   Your keyboard is a precision musical instrument made up of sophisticated electronic parts. Any modification of, or tampering with internal components can cause trouble or malfunction.

5. **Do not use lacquer thinner or similar chemicals for cleaning.**
   Clean the keyboard with a soft cloth dampened with a mild detergent solution and squeeze it until almost dry.

6. **Remove batteries before extended storage.**
   Batteries left in the unit for long periods can leak and cause damage to electronic circuitry.

7. **In case of malfunction...**
   Check whether buttons and connections are set correctly as indicated in the troubleshootiong chart. If the unit still does not work properly, contact the original retailer or a nearby dealer. Never attempt to repair the unit yourself. This can result in serious damage of the components.

14 Specifications

Model:	MT-640
Number of keys:	49 mini keys
Polyphonic:	10-note polyphonic
Preset tones:	20; Piano, Harpsichord, Vibraphone, Jazz organ, Pipe organ, Brass ens., Flute, Bells, Elec piano, Funky clavi, Jazz guitar, Organ, Accordion, Strings, Chorus, Synth-ens, Wood bass/Piano, Elec bass/Slap bass, Percussion 1, Percussion 2
Tone Bank sounds:	210
Auto-rhythms:	20; Rock 1-2, 8 beat 1-2, 16 beat 1-2, Disco 1-2, Pops 1-2, Slow rock 1-2, Swing, Samba, Bossa nova, Waltz, Reggae, Tango, Beguin, March
Rhythm source:	49 PCM rhythm sources
Auto-accompaniment function:	Casio Chord on/fingered 1/fingered 2
Percussion pads:	10; Hi tom, Mid tom, Low tom, Crash cymbal, Hi agogo, Low agogo, Quijada, Voice, Wind chime, Orchestra hit
Built-in effects:	Stereo delay, Stereo panning
Real-time memory:	Up to 1,250 notes
Terminals:	Output jack [output impedance: 50 Ω, output voltage: 2.5 V (RMS) MAX], MIDI terminals (IN/OUT), AC adaptor jack (DC 9 V)
Tuning control:	A4 = 442 Hz ±30 cents
Built-in speakers:	10 cm dia × 2 + 10 cm woofer
Auto power off function:	Approximately 6 minutes after the last operation

Power source:	3-way AC/DC power source; • AC: 100, 117, 220, 240V (±10 V), 50/60 Hz, with optional AD-5 AC adaptor. • DC: 6 D size (SUM-1/R20P) manganese dry batteries. Battery life: Approximately 6 hours • Car battery: Requires optional CA-5 car adaptor
Power consumption:	9 W
Dimensions:	800(W) × 277(D) × 109(H) mm 31 1/2″(W) × 10 7/8″(D) × 4 1/4″(H)
Weight:	4.6 kg (10.1 lbs) including batteries
Standard accessories:	6 "D" size dry batteries, score stand

** Designs and specifications are subject to change without notice.*

GUIDELINES LAID DOWN BY FCC RULES FOR USE OF THE UNIT IN THE U.S.A. (not applicable to other areas).

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

..... reorient the receiving antenna
..... relocate the computer with respect to the receiver
..... move the computer away from the receiver
..... plug the computer into a different outlet so that computer and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the US Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.

CASIO® MT-640

INSTRUMENTO MUSICAL ELECTRONICO

Introducción

Su nuevo teclado MT-640 es un instrumento musical de avanzada que incorpora la tecnología electrónica más moderna para que su manejo sea lo más simple posible. Su excepcional sonido, respaldado por una gran cantidad de características y funciones sofisticadas hacen que este teclado sea una verdadera fuente de diversión para todos. Para poder disfrutar al máximo de las características y funciones de esta unidad, le recomendamos leer detalladamente este manual y seguir las instrucciones contenidas.

Indice

1. Guía general 32
2. Fuente de alimentación 34
3. Operación general 35
4. Sistema de bajo dinámico 36
5. Sonidos programados 37
6. Combinaciones de sonido del banco de sonido 40
7. Ritmos automáticos 42
8. Acompañamiento automático 43
9. Parches de solo de percusión 47
10. Función de memoria de ejecución 48
11. MIDI 50
12. Localización de averías 55
13. Cuidado de su teclado 56
14. Especificaciones 57